

FQ5-481

16

What is claimed is:

1. A call admission control method in an ATM switch, comprising the steps of:

a) receiving a QoS (Quality of Service) specified
5 connection request;

b) calculating an assigned bandwidth on a link
associated with the QoS-specified connection request;

c) calculating an estimated bandwidth to be
assigned to an existing QoS-unspecified traffic on the link
10 associated with the QoS-specified connection request; and

d) determining whether the QoS-specified
connection request is accepted, based on a combination of
the assigned bandwidth and the estimated bandwidth.

2. The call admission control method according to
15 claim 1, wherein in the step (c), the estimated bandwidth on the link is obtained based on an average QoS-unspecified traffic of each QoS-unspecified virtual connection existing on the link associated with the QoS-specified connection request.

20 3. The call admission control method according to claim 2, wherein the average QoS-unspecified traffic is calculated by adding up existing QoS-unspecified traffics obtained at predetermined sampling time intervals.

09615719-071300

FQ5-481

17

4. The call admission control method according to claim 1, wherein the step (c) comprises the steps of:

c.1) adding up existing QoS-unspecified traffics obtained at predetermined sampling time intervals to produce a first average QoS-unspecified traffic;

c.2) sequentially storing a first average QoS-unspecified traffic each time a corresponding QoS-unspecified connection is established at the ATM switch; and

c.3) calculating the estimated bandwidth by averaging a predetermined number of first average QoS-unspecified traffics stored.

5. The call admission control method according to claim 1, wherein the step (d) comprises the steps of:

d.1) adding the assigned bandwidth and the estimated bandwidth to produce an currently assigned bandwidth in the link;

d.2) calculating an available bandwidth of the link by subtracting the currently assigned bandwidth from a full bandwidth of the link; and

d.3) determining whether the QoS-specified connection request is accepted, depending on a comparison of the available bandwidth and a requested bandwidth of the QoS-specified connection request.

6. A call admission control system in an ATM switch

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FQ5-481

18

having a plurality of links connected thereto, comprising:

a traffic monitor for monitoring a QoS-
unspecified traffic for each QoS-unspecified connection
existing on each link; ✓

5 a memory for storing a cell traffic management
table containing an average QoS-unspecified traffic for each
QoS-unspecified connection existing on each link; and ✓

a call admission manager for calculating an
estimated bandwidth by adding up average QoS-unspecified
10 traffics for all existing QoS-unspecified connections on a
link associated with a QoS-specified connection request,
wherein the estimated bandwidth is a bandwidth to be assigned
to the existing QoS-unspecified connections on the link, and
determining whether the QoS-specified connection request is
15 accepted, based on a combination of the estimated bandwidth
and an assigned bandwidth that is already assigned in the
link.

7. The call admission control system according to
claim 6, wherein an average QoS-unspecified traffic is
20 calculated by adding up existing QoS-unspecified traffics
obtained at predetermined sampling time intervals.

8. The call admission control method according to
claim 6, wherein the call admission manager adds the assigned
bandwidth and the estimated bandwidth to produce an
25 currently assigned bandwidth in the link, calculates an

09615719 071300

FQ5-481

19

available bandwidth of the link by subtracting the currently assigned bandwidth from a full bandwidth of the link, and determines whether the QoS-specified connection request is accepted, depending on a comparison of the available
5 bandwidth and a requested bandwidth of the QoS-specified connection request.

9. A call admission control system in an ATM switch having a plurality of links connected thereto, comprising:

10 a traffic monitor for monitoring a QoS-
unspecified traffic for each QoS-unspecified connection existing on each link;

15 a calculator for adding up existing QoS-
unspecified traffics obtained at predetermined sampling time intervals to produce a first average QoS-unspecified traffic, , and calculating the estimated bandwidth by averaging a predetermined number of first average QoS-
unspecified traffics stored;

20 a memory for storing a cell traffic management database sequentially containing a first average QoS-
unspecified traffic each time a QoS-unspecified connection is established at the ATM switch; and

25 a call admission manager for calculating an estimated bandwidth by adding up first average QoS-
unspecified traffics for all existing QoS-unspecified connections on a link associated with a QoS-specified connection request, wherein the estimated bandwidth is a

FQ5-481

20

bandwidth to be assigned to the existing QoS-unspecified connections on the link, and determining whether the QoS-specified connection request is accepted, based on a combination of the estimated bandwidth and an assigned
5 bandwidth that is already assigned in the link.

10. The call admission control method according to claim 9, wherein the call admission manager adds the assigned bandwidth and the estimated bandwidth to produce an currently assigned bandwidth in the link, calculates an
10 available bandwidth of the link by subtracting the currently assigned bandwidth from a full bandwidth of the link, and determines whether the QoS-specified connection request is accepted, depending on a comparison of the available bandwidth and a requested bandwidth of the QoS-specified
15 connection request.